IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of

TAGUCHI — **Art Unit 2154**

Application Number: 10/803,024

Filed: March 18, 2004

For: METHOD AND APPARATUS FOR STORAGE NETWORK MANAGEMENT

Attorney Docket No. HITC.0001

Honorable Assistant Commissioner
for Patents
Washington, D.C. 20231

COVER LETTER

Sir:

[x] The fee for submission of claims is calculated as shown below:

FOR	TOTAL WITH NEW CLAIMS ADDED	TOTAL CURRENTLY ON FILE	CLAIMS ALREADY PAID	RATE	CALCULATION
Total Claims	10	13	(Over 20)	x $50	0
Independent Claims	4	3	(Over 3)	x $200	200.00
MULTIPLE DEPENDENT CLAIM(S)				+ $360	0
REDUCTION FOR FILING BY SMALL ENTITY (note 37 C.F.R. §§ 1.9, 1.27, 1.28). IF APPLICABLE, VERIFIED STATEMENT MUST BE ATTACHED				x ½	
			TOTAL		200.00

In addition, the below-identified communications are submitted in the above-captioned application or proceeding:

[x] Preliminary Amendment (with Claim Amendments)
[ ] Substitute Specification
[ ] Assignment
[ ] Letter to Draftsperson
[ ] Terminal Disclaimer
[x] Petition to Make Special under 37 CFR §1.102(d) for Accelerated Examination
[x] Statements & Pre-exam search report with References
[x] Information Disclosure Statement with references

[ ] Please charge my **Deposit Account Number** _____ in the amount of _____ to cover the fees for _____. A duplicate copy of this paper is enclosed.

[x] Checks in the amount of **$130.00** to cover the petition fee and **$200.00** for the excess claim fee are enclosed.

[x] The Commissioner is hereby authorized to charge any additional fees associated with this communication, or credit any overpayment to **Deposit Account Number 08-1480**.

Respectfully submitted,

_____

Stanley P. Fisher
Registration Number 24,344

_____

Juan Carlos A. Marquez
Registration No. 34,072

REED SMITH LLP
3110 Fairview Park Drive
Suite 1400
Falls Church, Virginia 22042
(703) 641-4200
July 28, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of	)	
	)	
TAGUCHI	)	**Art Unit 2154**
	)	
Application Number: 10/803,024	)	
	)	
Filed: March 18, 2004	)	
	)	
For: METHOD AND APPARATUS FOR STORAGE STORAGE NETWORK MANAGEMENT	)	
	)	
Attorney Docket No. HITC.0001	)	

Honorable Assistant Commissioner for Patents
Washington, D.C. 20231

PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102(d)

FOR ACCELERATED EXAMINATION

Sir:

Pursuant to 37 C.F.R. § 1.102(d), Applicant respectively requests that the application be examined on the merits in conjunction with the pre-examination search results, the detailed discussion of the relevance of the results and amendments as filed concurrently.

Substantive consideration of the claims is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

REED SMITH LLP
3110 Fairview Park Drive, Suite 1400
Falls Church, Virginia 22042
(703) 641-4200
July 28, 2005
SPF/JCM/JT

Stanley P. Fisher
Registration Number 24,344

Juan Carlos A. Marquez
Registration Number 34,072

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of	)	
	)	
TAGUCHI	)	**Art Unit 2154**
	)	
Application Number: 10/803,024	)	
	)	
Filed: March 18, 2004	)	
	)	
For: METHOD AND APPARATUS FOR STORAGE NETWORK MANAGEMENT	)	
	)	
Attorney Docket No. HITC.0001	)	

Honorable Assistant Commissioner
for Patents
Washington, D.C. 20231

STATEMENTS & PRE-EXAMINATION SEARCH REPORT SUPPLEMENTAL TO THE PETITION TO MAKE SPECIAL

Sir:

Pursuant to 37 C.F.R. §§ 1.102 and MPEP 708.02 VIII, Applicant hereby submits that (1) all claims of record are directed to a single invention, or if the Office determines that all the claims presented are not obviously directed to a single invention, will make an election without traverse as a prerequisite to the grant of special status; (2) a pre-examination search has been conducted according to the following field of search; (3) copies of each reference deemed most closely related to the subject matter encompassed by the claims are enclosed; and (4) a detailed discussion of the references pointing out how the claimed subject matter is patentable over the references is also enclosed herewith.

FIELD OF THE SEARCH

The field of search was directed to Class 709, subclasses 219, 220, 223, 229, and Class 711, subclasses 111, 112, 114, and 163 (U.S. & Foreign). Additionally, a computer database search was conducted on the U.S.P.T.O. systems EAST and WEST for U.S. and foreign patents; a keyword search was conducted in Classes 709, 710, and 711; and a

literature search was conducted on the internet and commercial databases for relevant non-patent documents.

Class	Subclasses
709	219, 220, 223, 229, keyword
710	keyword
711	111, 112, 114, 163, keyword

The search was directed towards a method and apparatus for storage network management. With reference to the disclosure, FIG. 1A illustrates a managed network storage apparatus 100 including a plurality of storage service management devices 101 which are bi-directionally connected to a storage device 102. See section [0041]. The storage device 102 is, in turn, bi-directionally connected to a plurality of client groups 104N through a multi-protocol label switching ("MPLS") network 103. Id. FIG. 1B illustrates a more detailed view, wherein storage service management device 101 includes a service level agreement management console ("SLA Management Console) 101.2 in combination with a storage SLA definition table 101.4. See section [0044]. The storage service management device 101 includes a user interface (such as a PC) for managing connection parameters between the storage device 102 and the client groups 104N. The storage device 102 includes a plurality of disk storage resources ("LDEV") 109 which may be configured in a RAID architecture. See section [0046]. Data is communicated from the storage device 102 to the MPLS 103 by way of a plurality of network interfaces 108, which are managed by network I/F quality controller 102.4. The MPLS network 103 includes a plurality of a label switch routers ("LSR") 106 for communicating the data. Accordingly, the parameters defined in the storage SLA definition table 101.4 of storage service management device 101 define, inter alia, the data pathway connections between the storage device 102 and the client groups 104N through the MPLS network. In particular, the storage SLA definition table 101.4 defines which label switch routers 106N are to be used between each LDEV 109 and each client of a client group. Accordingly, port bandwidth and quality of service may be maintained in storage devices having label switching capability and storage devices not having label switching capability. See generally sections [0033], [0034]. FIG. 4 illustrates the SLA definition table 101.4 for each client address and LDEV. See section [0045]. Further, because multiple storage service management devices 101 may be connected to the

same storage device 102, the SLA definition table 101.4 also defines the appropriate label switching table 410 (i.e. LSP ID) to be used for each client address. Id.

In particular, the search was directed towards independent claim 1, which recites a storage system having a plurality of interface ports and a plurality of logical devices, wherein the interface ports are connected to a multiple protocol label switching (MPLS) network/ A method of establishing a path between a logical device and a client connected to the MPLS network, comprises selecting an interface port from among the plurality of interface ports, establishing a label switching path via the selected interface port to a client having a requested bandwidth, setting a service priority of the selected interface port to the client in response to the requested bandwidth, and operatively connecting at least one logical device selected from the plurality of the logical devices to the selected interface port.

Further, the search was also directed towards independent claim 5, which recites a storage system having a plurality of interface ports and a plurality of logical devices, wherein the interface ports are connected to a multiple protocol label switching (MPLS) network and the interface ports are formed to conduct MPLS protocol. A method of establishing a path between a logical device and a client connected to the MPLS network, comprises selecting an interface port from among the plurality of ports; requesting a management server connected to the MPLS network to establish a label switching path between the selected interface port and a client having a requested bandwidth, establishing the label switching path between the selected interface port and the client with the requested bandwidth in response to said requesting step; setting a service priority of the selected interface port with respect to the client in response to the requested bandwidth, and attaching at least one of the plurality of logical devices to the selected interface port.

Even more, the search was also directed towards independent claim 9, which recites a storage system, comprising a plurality of interface ports coupled to a multiple protocol label switching (MPLS) network, each of the interface ports being formed to establish a label switching path (LSP) to a client coupled to the MPLS network; and a plurality of logical devices formed to be operatively attachable to at least one of the plurality of interface ports. (See Conclusion paragraph for highlighted portions of the claims.)

LIST OF RELEVANT REFERENCES

The search revealed the following U.S. patents, which are listed for convenience:

U.S. Patent Number	Inventor(s)
6,684,209	Ito et al.
6,779,083	Ito et al.
6,839,746	Muthiyan et al.
6,865,617	Zeidner et al.
U.S. Publication Number	**Inventor(s)**
2002/0143999	Yamagami
2004/0167972	Demmon

Discussion of References:

U.S. Patent No. 6,684,209 ('209) to **Ito** et al. relates to a security method and system for a storage subsystem. FIG. 1 illustrates a storage subsystem 101 having ports 102-104 for a fiber channel interface and it is physically connected with host computers 105-107 via the fiber channel interface. See col. 8, ln. 47-59. The storage subsystem 101 can communicate with each other according to a fiber channel protocol. Id. In the fiber channel, a communication is executed by exchanging a signal level information called an Ordered Set and a logical information having fixed format called a frame. FIG. 2 shows a representative structure of a frame block 201 comprises of, an SOF (Start of Frame) 202, a Frame Header 203 of 24 bytes, (i.e. a link operation for the frame), a Data Field 204 which contains the actual data to be transferred, and an EOF (End of Frame) 206. FIG. 23 illustrates a representative "LUN Access Management Table" 2301 which is defined for each port of the storage subsystem and comprises a LUN 2304 in the storage subsystem, a Virtual LUN 2303, and a Company_ID 2302 of the host computer. See col. 16, ln. 42-54. FIG. 27 illustrates various host computers 2703-2711 connected to storage subsystem 2701 via the fabric 2702 of fiber channel. See col. 18, ln. 46-57. Host computers are permitted to access only the LUA0 to LUA4 according to the security setting in the "LUN Access Management Table" 2701, even though these host computers belong to different domains from each other. Id. Among different vendors of the host computers, a particular host computer is blocked from accessing any LU permitted to the other vendors because of the exclusive mechanism based

on the security setting in the Table 2601. Id. Thus, accordingly, in the storage subsystem which defined this "LUN Access Management Table" 2301, the LUN can be disclosed to the host computer made by each vendor in accordance with the users convenience. See col. 18, ln. 56 to col. 19, ln. 7.

However, the storage subsystem which defines the LUN access management table of **Ito '209** does do not determine a label switching path for a requested bandwidth nor set a service priority to the requested bandwidth. As such, **Ito '209** does not "establish a label switching path via the selected interface port to a client having a requested bandwidth and set a service priority of the selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5. **Ito '209** does not provide "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9, and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13.

U.S. Patent No. 6,779,083 ('083) to **Ito** et al. relates to a security system for logical units in a storage subsystem. FIG. 1 illustrates storage subsystem 101 including ports 102-104 for a Fiber Channel interface, and is physically connected to host computers 105-107 through the Fiber Channel interface. See col. 6, ln. 35-58. The host computers 108-112 have ports 108-112 for the Fiber Channel interface and the host computers 105-107 communicate with the storage subsystem 101 by using a Fiber Channel protocol. Id. Several kinds of connection forms (topology) exist as the connection form between the storage subsystem 101 and the host computers 105 to 107, such as Point_to_Point, an arbitration loop connection, a fabric connection, and so forth. Id. FIG. 13 illustrates a grouping of host computers by using the "LUN access management table" 1201 shown in FIG. 12. See col. 11, ln. 63-67. FIGS. 17 and 18 show the flow of a series of processing, and FIG. 19 shows the reference relation of each table and parameters used in the flow of processing. See col. 13, ln. 1-6. In FIG. 17, Step 1707, the storage subsystem retrieves the "WWN_S_ID_GID conversion table" 1601 shown in FIG. 16 by using resulting S_ID as the key and acquires GID corresponding to this S_ID. The flow up to this step represents the reference operation of Steps 1901, 1902 and 1903 in FIG. 19. When GID for this S_ID is not retrieved from the table 1601 in Step 1903,

the user does not register LUN, the access of which is permitted to the host computer, and the access to LUN requested from the host computer is rejected. See col. 13, ln. 6-30. It is only at the time of generating the Inquiry command that the host computer inquires access approval/rejection to LUN. In other words, while login remains effective, this inquiry need not be repeated. See col. 14, ln. 13-25.

However, the registration of LUN access through the LUN access management table of **Ito '083** does not determine a label switching path for a requested bandwidth nor set a service priority to the requested bandwidth. As such, **Ito '083** does not "establish a label switching path via the selected interface port to a client having a requested bandwidth and set a service priority of the selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5. **Ito '083** also does not provide "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9, and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13.

U.S. Patent No. 6,839,746 to **Muthiyan** et al. relates to a logical relationships manager for a storage area network. FIG. 1 illustrates a storage area network (SAN) 100 which includes one or more hosts (e.g., host 102A, 102B and 102C), one or more storage devices 104, and one or more SAN fabrics 110. See col. 3, ln. 15-32. A Host 102 includes a SAN management server 150 that is communicably linked to a SAN administration system 106, which includes a SAN manager 142, a central database 126, a host 102B and a host 102C. Id. The SAN management server 150 is also communicatably linked to the storage devices 104 through the SAN fabrics 110. Id. The SAN management server 150 is configured to discover SAN devices, such as hosts, HBAs, switches and storage devices, to maintain a data store of real-time object information and to manage SAN resources through zoning and logical unit number (LUN) access control. See 4, ln. 4-18. The SAN management server 150 also supports user-defined and automatic grouping of objects based on quality of service (QoS) criteria. Id. The SAN management server 150 includes the device logical relationships manager 121, which is generally configured to manage logical relationships between SAN devices, such as HBAs, switches, arrays, bridges, routers, and the

like. In another embodiment, the device logical relationships manager 121 may be stored outside of the SAN management server 150. See col. 4, ln. 18-33. The SAN management server 150 may also include one or more explorers 160, which are configured to gather information for the SAN management server 150. See col. 5, ln. 30-43. The SAN management server 150 periodically examines the SAN 100 for devices that are added, devices that are removed, and connections that are pulled. Id. Explorers 160 may use different methods to discover information about heterogeneous SAN devices, such as query devices in the SAN 100 to retrieve a standard set of attributes for each type of device. See col. 5, ln. 44-57.

However, **Muthiyan**'s explorers 160 for the SAN management server 150 do not determine a label switching path for a requested bandwidth nor set a service priority to the requested bandwidth. As such, **Muthiyan** does not "establish a label switching path via the selected interface port to a client having a requested bandwidth and set a service priority of the selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5. **Muthiyan** also does not provide "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9, and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13.

U.S. Patent No. 6,865,617 to **Zeidner** et al. relates to a system that maps a SCSI device with a virtual logical unit number and a multicast address for data replication over a TCP/IP network. FIG. 2 shows an exemplary embodiment of a SCSI initiator 201 that is connected via a TCP/IP backbone 203 including routers to three targets: a target 0205A, a target 1205B, and a target 2205C. See col. 4, ln. 32-38. A target is connected via a SCSI bus to its own SCSI devices or logical units. See col. 4, ln. 45-54. FIG. 2 illustrates the target 0205A that includes two SCSI devices, namely a logical unit 0207 and a logical unit 1209; the target 1205B that includes three SCSI devices: a logical unit 0211, a logical unit 1213 and a logical unit 2215; and the target 2205C that includes one SCSI device, namely a logical unit 0217. Id. It is possible for multiple SCSI devices at a single target to become part of the group. See col. 7, ln. 1-8. In response to a registration command, the targets will respond by

registering to the multicast group using the group IP address. See col. 7, ln. 9-18. Likewise, SCSI devices within a target will establish a mapping between the SCSI virtual logical unit number. See col. 7, ln. 19-29. FIG. 3 illustrates that each target sends a registration confirmation message to the Unicast address of the initiator. See col. 7, ln. 41-46.

However, **Zeidner**'s SCSI initiators do not determine a label switching path for a requested bandwidth nor set a service priority to the requested bandwidth. As such, **Zeidner** does not "establish a label switching path via the selected interface port to a client having a requested bandwidth and set a service priority of the selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5. **Zeidner** further does not provide "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9, and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13.

U.S. Pub. No. 2002/0143999 to **Yamagami** relates to a path selection method for a storage based remote copy. FIGS. 1A-1B illustrate a primary storage system 100a and a secondary storage system 100b that each comprise one or more volumes that store data. See section [0032]. Data stored on volumes of the primary storage system 100a is copied to identical volumes in the secondary storage system 100b. FIG. 2 illustrates relationships between paths and volumes 103a, 103b, . . . , 103n within the primary storage system 100a. See section [0039]. A path using policy 210 maps a volume and one or more path groups, and defines priority for using paths when transferring data to the secondary storage system 100b. See section [0040]. FIG. 4 illustrates a path group table 400 that provides information about a path using policy 210, and maps path groups and ports. See section [0044]. FIG. 5 illustrates a request to transfer data to the secondary storage system 100b by accessing a path selection table 300. In a step 520, the path group is examined to determine whether all constraints are satisfied. One constraint is a time constraint that limits the time when the primary storage system 100a is allowed to use a particular path group. A throughput constraint limits the maximum throughput that the primary storage system 100a is allowed to use from a particular path group.

However, the throughput constraints of **Yamagami** do not determine a label switching path for a requested bandwidth nor set a service priority to the requested bandwidth. As such, **Yamagami** does not "establish a label switching path via the selected interface port to a client having a requested bandwidth and set a service priority of the selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5. **Yamagami** also does not provide "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9, and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13.

U.S. Pub. 2004/0167972 to **Demmon** relates to an apparatus and method for providing dynamic and automated assignment of data logical unit numbers. FIG. 1 illustrates a storage area network (SAN) 100 that provides dynamic and automated assignment of data logical unit numbers (LUNs). The SAN 100 may includes multiple servers, collectively designated by the reference numeral 102, a fiber channel switch 108, and multiple storage devices or disk arrays, collectively designated by the reference numeral 110. The SAN 100 may also include a backup server 104, connected to a management server 112 and a backup storage 106, such as a tape drive, for data backup. FIG. 3 is a flow chart illustrating a method for providing dynamic and automated assignment of data LUNs in a secure SAN environment. The backup software 220 automatically assigns the snapshot identifier 230 to the snapshot LUN 242. If the creation of the snapshot LUN 242 is successful (block 306), the backup software 220 passes the snapshot identifier 230 to the backup server 204 (block 308). The method of dynamic and automated assignment of data LUNs eliminates the need for the management server 212 to discover the snapshot LUN 242 prior to assigning the snapshot LUN 242 to the backup server 204. The automated assignment of data LUNs can be incorporated into array-based and switch-based LUN security methods.

However, the automated assignment of data of **Demmon** does not determine a label switching path for a requested bandwidth nor set a service priority to the requested bandwidth. As such, **Demmon** does not "establish a label switching path via the selected interface port to a client having a requested bandwidth and set a service priority of the

selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5. **Demmon** also does not provide "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9, and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13.

Conclusion

Based on the results of the comprehensive prior art search as discussed above, Applicants contend that the method or system as recited in independent claims 1, 5, 9 and 13, especially the features of "establishing a label switching path via the selected interface port to a client having a requested bandwidth; setting a service priority of the selected interface port to the client in response to the requested bandwidth" as recited in claims 1 and 5; "each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 9; and "the client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth" as recited in claim 13 are patentably distinct from the cited prior art references.

In a storage system having a plurality of interface ports and a plurality of logical devices, wherein the interface ports are connected to a multiple protocol label switching (MPLS) network and the interface ports are formed to conduct MPLS protocol, the method of establishing a path between a logical device and a client connected to a MPLS network of the invention, as recited in claim 1, comprising: selecting an interface port from among the plurality of interface ports; establishing a label switching path via the selected interface port to a client having a requested bandwidth; setting a service priority of the selected interface port to the client in response to the requested bandwidth; and operatively connecting at least one logical device selected from the plurality of the logical devices to the selected interface port.

The invention as recited in claim 5, is directed to the method recited in claim 1, but further comprising a step of: requesting a management server connected to the MPLS network to establish a label switching path between the selected interface port and a client having a requested bandwidth.

The invention as recited in claim 9, is directed to a storage system, comprising: a plurality of interface ports coupled to a multiple protocol label switching (MPLS) network, each of the interface ports being formed to establish a label switching path (LSP) to a client coupled to the MPLS network; and a plurality of logical devices formed to be operatively attachable to at least one of the plurality of interface ports. Each of said plurality of interface ports includes a means for establishing a label switching path in response to a client having a requested bandwidth, means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth.

The invention as recited in claim 13, is directed to a storage system comprising the interface ports and the logical devices formed of claim 9, and a management server operatively connected to the MPLS network, the management server including a means for establishing a label switching path between at least one of the plurality of interface ports and a client coupled to the MPLS network. The client has a requested bandwidth, and said management server further includes means for setting a priority of service to the client with which the label switching path is established in response to the requested bandwidth.

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable consideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance

of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344

Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive
Suite 1400
Falls Church, Virginia 22042
(703) 641-4200

July 28, 2005

SPF/JCM/JT